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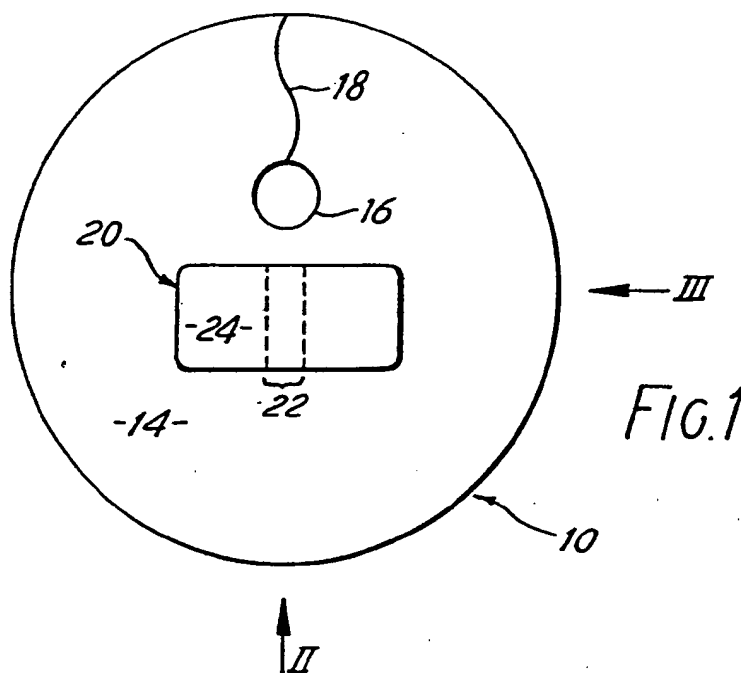
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(54) Catheter retaining device

(57) A catheter retainer is made by die stamping a pad 10 and a tab 20 from a sheet material comprising a layer of medical grade skin-compatible adhesive and a relatively thin layer of non-adhesive, heat weldable material. The tab is heat welded to the pad. The tab may be folded about and adhere to a catheter passing through the hole 16 in the pad.



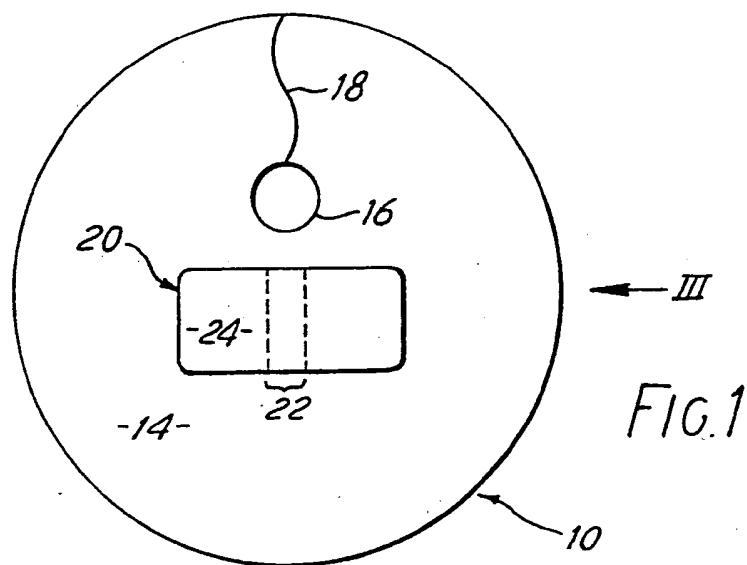


FIG. 1

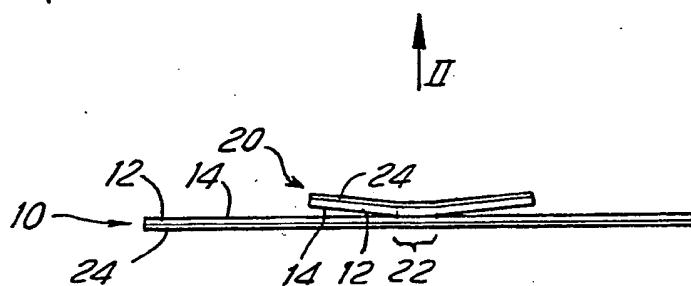


FIG. 2

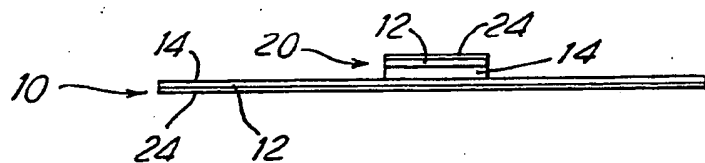


FIG. 3

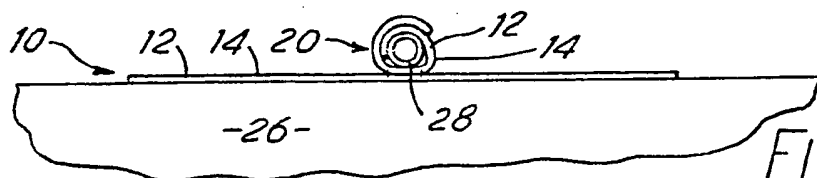


FIG. 4

CATHETER RETAINING DEVICE

This invention relates to a catheter retaining device.

Catheters for withdrawing or draining body fluids are used in a wide variety of medical and surgical situations. Catheters are tubular and are frequently made of rubber or synthetic rubber. They vary in overall diameter and wall thickness. To hold a catheter in position on the body of a patient a clamping force is usually applied to the catheter. Known catheter retaining devices are designed particularly for use with a narrow size range of catheter. Catheter retaining devices which clamp the tube are normally not satisfactory for use both with a relatively large outside diameter, large wall thickness catheter and with a thin-walled catheter because the clamping force tends to deform the thin wall thickness catheter and to close off the passage therein.

The embodiment of catheter retaining device disclosed herein is versatile and allows a catheter to be retained without the use of a clamp.

According to one aspect of the present invention there is provided a catheter retainer including a pad having a hole therein, one surface of the pad being adhesive for adhering to the body of a patient, and the other surface of the pad mounting a tab element adjacent said hole, said tab element being foldable relative to the pad, and the surface of the tab remote from the pad being adhesive, the arrangement being such that the adhesive tab can be folded around and adhere to a catheter which extends through the hole, so retaining the catheter in position.

According to another aspect of this invention there is provided a method of forming a catheter retainer which comprises the steps of providing a sheet material having an adhesive surface, forming from said material a tab and a pad, said pad having a central hole, and securing a part of said tab to said pad adjacent said hole, with the adhesive surfaces of said pad and said tab facing away from each other, whereby the pad may be adhered to the body of a patient

and the tab can be folded around and adhere to a catheter passing through the hole in the pad.

The invention will now be described by way of non-limiting example, reference being made to the accompanying drawings, in which:-

Figure 1 is a front view of a catheter retainer according to an example of the invention;

Figure 2 is a side view of the retainer of Figure 1 in the direction of arrow II;

Figure 3 is a side view of the retainer of Figures 1 and 2 in the direction of arrow II; and

Figure 4 is a side view similar to that of Figure 2 but illustrating the retention of a catheter.

Referring to Figures 1-3, the catheter comprises a pad 10 made up of a layer of medical grade skin-compatible adhesive 12 and a relatively thin sheet 14 of embossed polyethylene or other suitable non-adhesive, heat weldable material. The medical grade adhesive material may be a plastic adhesive material comprising a blend of a water-soluble or water-swellaable hydrocolloid and a water-insoluble, viscous elastic binder. An example of such material is that known under the Registered Trade Mark STOMAHESIVE (U.K. Registration No. 1 163 479). Other similar materials are also suitable. The pad 10 includes a hole 16 and a lead-in slit 18 for allowing the pad to be slid around a catheter.

Attached to the pad 10, adjacent the hole 16 is a rectangular tab 20 of material which is the same as that making up the pad 10, i.e. made up of a medical grade adhesive layer and a non-adhesive embossed polyethylene sheet. The tab 20 is attached by placing the polyethylene layers of the tab and the pad in contact and then heat welding a small region 22 of the tab to the pad to secure the tab to the pad, but to allow folding movement of the tab with respect to the pad. The exposed adhesive surfaces of the adhesive layers on the pad and the tab are covered by release papers 24.

The catheter retainer can be fabricated simply by die cutting the pad and the tab from a sheet of material having a layer of embossed polyethylene, a layer of medical grade, skin-compatible material and a release layer, locating

the tab element in position on the pad element and then heat welding.

Referring to Figure 4, in use the release paper 24 is removed from the pad and the pad is adhered to the patient's body 26. The catheter 28 is located in the hole 16 in the required position. The release paper 24 is removed from the tab 20 and the tab 20 folded about the catheter to retain it. Where the catheter is relatively small in diameter the tab ends will overlap as shown in Figure 4. The adhesive material of the tab allows good bonding between the catheter and the tab even in adverse conditions. Also, because the tube is retained by adhesion rather than by clamping, the probability of inadvertently restricting or closing the catheter passage is reduced compared to those devices which use a clamping force. Furthermore, the probability of the catheter slipping relative to the retainer is reduced. The retainer is very simple to manufacture requiring only one stock material. This is unlike other proposed devices which use injection moulded clamping elements which are then bonded to adhesive pads.

As a development of the above device, the catheter retainer may include a drainage pouch which collects fluid discharged from the catheter. The pouch may be provided with an annular adhesive ring which adheres to the outer periphery of the pad 10 so that efficient passing from the catheter through the retaining device drains into the pouch.

CLAIMS

1. A catheter retainer including a pad having a hole therein, one surface of the pad being adhesive for adhering to the body of a patient, and the other surface of the pad mounting a tab element adjacent said hole, said tab element being foldable relative to the pad, and the surface of the tab remote from the pad being adhesive, the arrangement being such that the adhesive tab can be folded around and adhere to a catheter which extends through the hole, so retaining the catheter in position.
2. A catheter retainer according to claim 1, wherein said pad is made up of a sheet of medical grade skin-compatible adhesive material and a superimposed layer of non-adhesive material.
3. A catheter retainer according to claim 1 or claim 2, wherein said tab is made up of a sheet of medical grade skin-compatible adhesive material and a superimposed layer of non-adhesive material.
4. A catheter retainer according to claim 3, wherein said tab is attached to said pad by heat-welding.
5. A catheter retainer according to any one of claims 2 to 4, wherein said non-adhesive layer comprises embossed polyethylene.
6. A catheter retainer according to any one of claims 2 to 5, wherein said medical grade skin-compatible adhesive material comprises a blend of a water-soluble or water-swellaable hydrocolloid and a water-swellaable, viscious elastic binder.

7. A method of forming a catheter retainer which comprises the steps of providing a sheet material having an adhesive surface, forming from said material a tab and a pad, said pad having a central hole, and securing a part of said tab to said pad adjacent said hole, with the adhesive surfaces of said pad and said tab facing away from each other, whereby the pad may be adhered to the body of a patient and the tab element can be folded around and adhere to a catheter passing through the hole in the pad.

8. A method according to claim 7, wherein said sheet material is made up of a layer of medical grade skin-compatible adhesive material and a superimposed layer of non-adhesive material and said tab is secured to said pad by heat welding.

9. A catheter retainer substantially as herein described with reference to and as illustrated in the accompanying drawings.

10. A method of forming a catheter retainer, substantially as herein described with reference to and as illustrated in the accompanying drawings.

11. Any novel combination or sub-combination disclosed and/or illustrated herein.

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